

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference Jg-3152-PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/GB2004/003425	International filing date (day/month/year) 06/08/2004	(Earliest) Priority Date (day/month/year) 08/08/2003
Applicant LEXCEL TECHNOLOGY LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

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Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

An electrochemical cell having a solid polymer separator/electrolyte (15) whose ion conductivity is markedly increased by in situ generation of a fluid acidic anhydride. The electrochemical cell comprises a solid polymer electrolyte (15), an anode (17) of an alkali or alkaline earth metal such as lithium and a cathode (13) containing the lithium or other alkali or alkaline earth metal salt of the acid anhydride to be electrochemically generated in addition to the main active material. The salt has the formula $MAxOy$ where M is an alkali or alkaline earth metal such as lithium and A is a non-metallic element such as sulphur, nitrogen, carbon or phosphorus $0.3 \leq x \leq 2.0$ and $1.3 \leq y \leq 4$. The electrochemical cell has a much improved rate capability and low temperature performance, but no liquid constituents are required for assembly of the cell.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01M10/36 H01M6/18 H01G9/04 H01M4/62 H01M4/02
H01M10/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01M H01G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>EP 1 143 549 A (SONY CORPORATION) 10 October 2001 (2001-10-10) page 3, paragraph 16 page 4, paragraph 27 - paragraph 29 page 4, paragraph 33 - page 5, paragraph 35 page 15, paragraph 118 - page 17, paragraph 138</p> <p style="text-align: center;">----- -/--</p>	<p>1-4, 11-14</p>

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

26 May 2005

Date of mailing of the international search report

03/06/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GILMOUR A: "A novel rechargeable lithium composite cathode system" JOURNAL OF POWER SOURCES, ELSEVIER SEQUOIA S.A. LAUSANNE, CH, vol. 65, no. 1, March 1997 (1997-03), pages 241-245, XP004059657 ISSN: 0378-7753 page 241, right-hand column, paragraph 2 page 242, left-hand column, paragraph 2 page 244, left-hand column, paragraph 3 - page 245, left-hand column, paragraph 1</p>	1-5, 7, 12-14
A	<p>WO 95/34920 A (LEXCEL TECHNOLOGY LIMITED; GILMOUR, ALEXANDER) 21 December 1995 (1995-12-21) cited in the application page 2, paragraph 2 - page 3, paragraph 2 page 4, paragraph 2 page 8, paragraph 1 - paragraph 2; example 1 page 10; example 3</p>	1-7, 12-14
A	<p>GB 2 335 073 A (* LEXCEL TECHNOLOGY LTD) 8 September 1999 (1999-09-08) cited in the application page 2, paragraph 5 page 4, paragraph 1 - paragraph 3 page 5, paragraph 1 - paragraph 3 page 6, paragraph 1 - paragraph 3</p>	1-14
A	<p>STASSEN I ET AL: "Metallic lithium batteries for high power applications" JOURNAL OF POWER SOURCES, ELSEVIER SEQUOIA S.A. LAUSANNE, CH, vol. 105, no. 2, 20 March 2002 (2002-03-20), pages 43-48, XP004344334 ISSN: 0378-7753 the whole document</p>	1-14

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1143549	A	10-10-2001	JP 2001283910 A	12-10-2001
			JP 2001291517 A	19-10-2001
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			CN 1322026 A	14-11-2001
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			US 2002031703 A1	14-03-2002
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			WO 9534920 A1	21-12-1995
			US 5741607 A	21-04-1998
GB 2335073	A	08-09-1999	NONE	